

## A new species of the genus *Retinia* attacking *Pseudotsuga sinensis* Dode in China (Lepidoptera: Tortricidae)

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**Abstract:** *Retinia pseudotsugaicola* Liu et Wu, new species, is described from Yunnan Province, China. The larvae attacked cones of *Pseudotsuga sinensis* Dode. Adults, genitalia and larvae are figured. A brief note on the biology is given.

**Key words:** Tortricidae; Olethreutinae; *Retinia pseudotsugaicola* Liu et Wu; *Pseudotsuga sinensis* Dode; new species; China

A serious tortricid pest on the cones of *Pseudotsuga sinensis* Dode, which is an economic tree species in the southwestern and central part of China, has been recently found in Yunnan Province. This moth damages 80 to 90 percent cones of the tree. As a result of examination<sup>[1~7]</sup>, we concluded that this insect represents a new species belonging to the genus *Retinia*. In the following lines the species is described and a brief note on the biology is given. Type specimens are deposited in the Institute of Zoology, Chinese Academy of Sciences.

### *Retinia pseudotsugaicola* Liu et Wu, sp. nov. (Figs. 1~11)

Forewing-length 8~12 mm. Antenna and labial palpus reddish brown. Head blackish brown. Thorax greyish white mixed with black and brown dots. Forewing long, apex acute, termen slightly convex, tornal angle distinct; ground color dark brown mixed with black; a transverse greyish white fascia located at basal 1/6; another one located from basal 1/3 to apical 1/5, fully with cloudy marks of greyish green and greyish yellow; cilia brown. Forewing with 12 veins, all veins separated;  $R_1$  from near middle of discal cell, stem of  $R_{4+5}$  (chorda) and M-stem distinct. Hindwing brown, cilia yellowish brown. Hindwing with 8 veins;  $M_3$  and  $Cu_1$  stalked; 1A and 3A distinct.

Male genitalia: Uncus rudimentary. Socius long, curved inwardly. Aedeagus short, vesica armed with about 17 cornuti. Valva constricted very much deeply; ventral margin of sacculus right angular; ventral concavity deep; clasper big. Cucullus oval, ventral angle acute.

Female genitalia: posterior apophysis slightly shorter than anterior apophysis. Width more than length of sterigma. Antrum calyiform. Signa different in size.

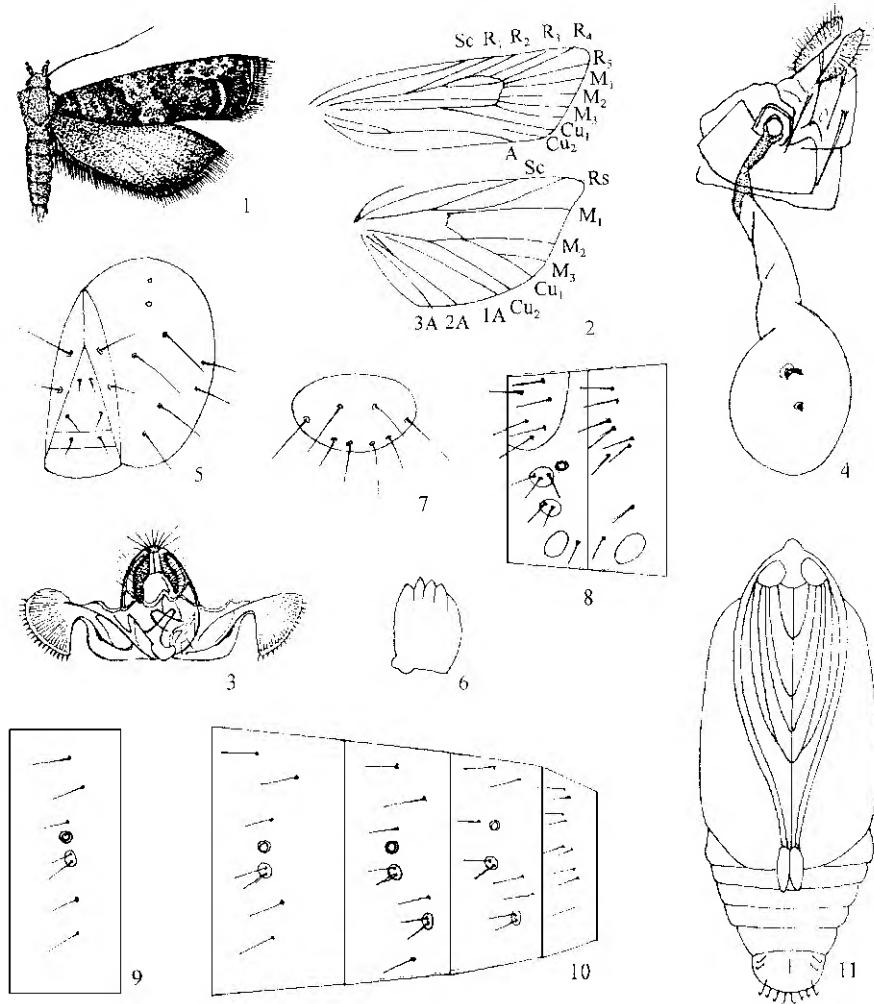
Holotype ♂: Luquan County ( $E102.5^\circ$ ,  $N25.6^\circ$ ), Yunnan Province, Collected by PAN Yong-zhi; paratypes 2♀ 3♂, same data as holotype.

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Distribution: Yunnan, China.

Egg: length 1.32~1.77 mm, width 0.82~1.00 mm. Elliptic, slightly flat, superficially rough.

Mature larva: length about 11 mm, yellowish brown. Crochets uniorbital circle. Chaetotaxy: cranial setae as shown in Fig. 5. Thoracic setae as in Fig. 8. Abdominal setae as in Figs. 9~10.



Figs. 1~11 *Retinia pseudotsugaicola* Liu et Wu, sp. nov. 黄杉实小卷蛾, 新种

1. adult 成虫; 2. wing venation 脉序; 3. male genitalia 雄性外生殖器; 4. female genitalia 雌性外生殖器;

5~10. larva 幼虫; 5. head, frontal view 头部, 前面观; 6. mandible 上颚; 7. anal plate 臀板; 8. chaetotaxy of pro- and mesothorax 前胸和中胸的毛序; 9. first abdominal segment 第1腹节; 10. sixth to ninth abdominal segments 第6~9腹节; 11. pupa 蛹

Pupa: length 5.28~9.58 mm. Color reddish brown. Abdominal segments 2~7 with two transverse rows of spines dorsally, the spines of the anterior row larger than those of posterior one. Abdominal segments 8~9 with one transverse row of spines dorsally. Abdominal segment 10 with six pairs of hooked setae.

Host plant: *Pseudotsuga sinensis* Dode (Pinaceae). Biological note: This moth is univoltine in Kunming, Yunnan Province. In April, hatched larvae eat the cones. In July, mature larvae pupate in the damaged cones, and pupae overwinter in the same parts. In next March, the adults emerge.

Etymology: The specific name is derived from its host plant, pseudotsuga, and Latin "colo", meaning resident.

Remarks: This new species differs from all other congeners by the valva constricted very much deeply and the specific pattern of the forewing.

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## 危害黄杉球果的实小卷蛾属一新种 (鳞翅目: 卷蛾科)

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**摘要:** 记述了实小卷蛾属(小卷蛾亚科, 花小卷蛾族)的一个新种, 黄杉实小卷蛾 *Retinia pseudotsugaecola* Liu et Wu, sp. nov.. 其幼虫危害黄杉 *Pseudotsuga sinensis* Dode 的球果, 在云南省禄劝县云龙乡球果受害率达 80%~90%。该新种雄性外生殖器的抱器瓣在腹面中央凹陷很深, 抱器腹拐角几乎呈直角, 抱器端的腹角尖, 可与该属其它种相区别。该新种的雌性外生殖器与松实小卷蛾 *R. cristata* 很相似, 但成虫的花纹完全不同, 该新种前翅的中横带很宽, 且布满了灰绿色和灰黄色的云状纹, 而松实小卷蛾前翅的中横带则较窄, 翅端有明显的肛上纹。在昆明禄劝县一年发生 1 代, 以蛹在球果中越冬。越冬蛹于翌年 3 月下旬开始羽化。4 月上旬至 7 月下旬是幼虫危害期。老熟幼虫 7 月下旬开始陆续化蛹越冬。提供了成虫外形、翅脉、雌雄外生殖器解剖图及幼虫的毛序图。模式标本保存在中国科学院动物研究所。

**关键词:** 卷蛾科; 小卷蛾亚科; 黄杉实小卷蛾; 新种; 中国

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